

AIRCRAFT TIRE WITH IMPROVED  
HIGH SPEED PROPERTIES

5    **Technical Field**

The invention relates to an aircraft tire with improved retreadability and improved high-speed properties.

**Background Art**

10    In the prior art, nylon is a preferred reinforcement material for aircraft tires because it is forgiving and is not as subject to fatigue as other available materials. Nylon reinforcement, however, does not have superior strength and many plies of nylon are needed in the construction of an aircraft tire.

15    It is known in the art to build aircraft tires using aramid reinforcement, but such tires, although they can be constructed using fewer plies and have better wear than a nylon reinforced tire, are generally considered to be harder to qualify at high speeds and are not used in high speed applications.

20    Prior art tires have been constructed using a nylon reinforced carcass and a folded aramid belt reinforcement in the crown area of the tire. Such tires wear well, but they are generally accepted for use only at speeds up to about 190 mph, although applicant on several occasions has run successful tests on the tires up to about 210 mph. Such tires, however, show a high level of rejection for first retreading since folded edges of the folded belt show large numbers of separations when the tread is removed. Economical use of aircraft tires is highly dependent on the number of times an aircraft tire can be retreaded.

25    JP-A-07 009814 teaches a high modulus belt reinforcement made of aramid cords which is wrapped around an outer belt having no folded edges.

FR-A-2 617 682 shows a belt reinforcement wrapped around an outer belt with no folded edges.

30    LU-A-44 682 shows an aircraft tire comprising at least a pair of parallel annular beads, at least one carcass ply wrapped around said beads, a high modulus belt reinforcement with folded edges disposed over the carcass ply in the crown area of the tire, tread disposed over the belt reinforcement and sidewalls disposed between the tread and the beads.

It is an object of the present invention to provide a tire construction which shows good wear and retreadability yet has improved high speed potential. Other objects of the invention will be apparent from the following specification and claims.

35    **Summary of the Invention**

An aircraft tire of the invention has at least one pair of parallel annular beads, at least one